

Gas Discharge Tube (GDT) Data Sheet

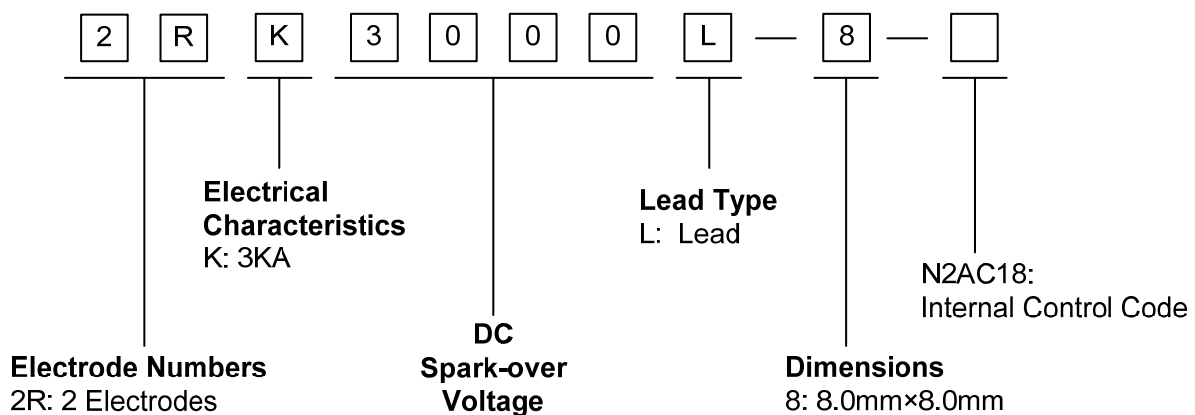
Features

- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/ μ s.
- Stable breakdown voltage.
- High insulation resistance.
- Low capacitance (≤ 2.0 pF)
- High holdover voltage
- Large absorbing transient current capability.
- Micro-Gap Design
- Size: 8.0mm*8.0mm
- Storage and operational temperature: -40°C ~ +85°C
- Meets MSL level 1, per J-STD-020
- Safety certification: E327997

Applications

- Repeaters, Modems.
- Telephone Interface, Line cards.
- Data communication equipment.
- Line test equipment

Part Number Code



Marking

B : BrightKing Logo
 2RK3000-8 : Device Marking Code
 YXXX : Date Code

Dimensions

| | Symbol | Dimension (mm) | |
|---|--------|----------------|------------|
| | | Spec. | Tolerance |
| | D | 8.0 | +0.3, -0.5 |
| | T | 8.0 | +0.6, -0.1 |
| | d | 0.8 | ±0.1 |
| L | 30.0 | Max. | |

Electrical Characteristics

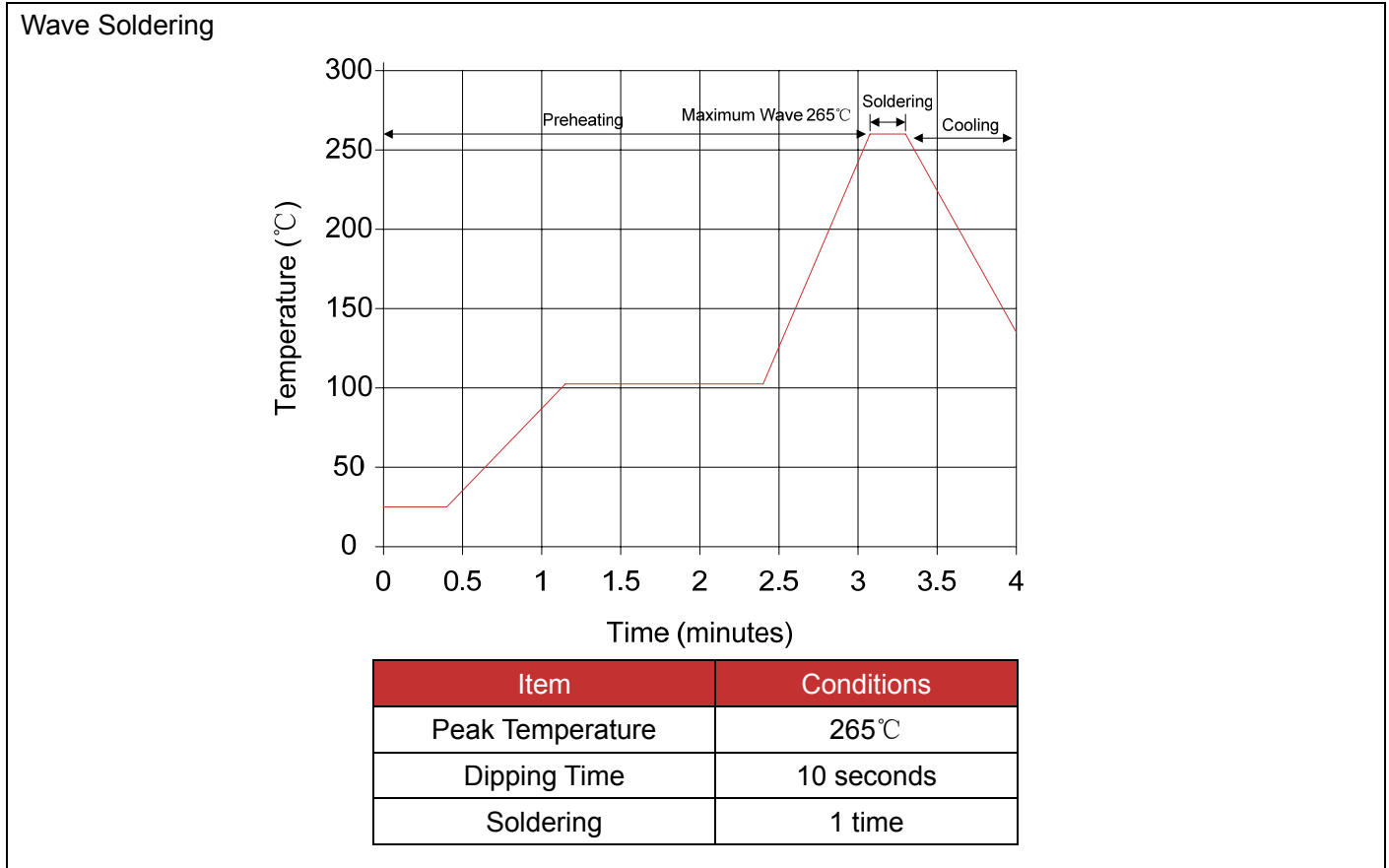
| Model Number: 2RK3000L-8 | | | | | Part Number: 2RK3000L-8-N2AC18 | | | | |
|--------------------------|------------------------------------|-----------------------------------|-------------------------------|----------------|--------------------------------|-------------------------------|------|---------------------|---------------------|
| DC Spark-over Voltage | Maximum Impulse Spark-over Voltage | Nominal Impulse Discharge Current | Alternating Discharge Current | Impulse Life | AC Withstanding Voltage | Minimum Insulation Resistance | | Maximum Capacitance | Device Marking Code |
| | | | | | | Test Voltage | (GΩ) | | |
| (V) | (V) | (KA) | (A) | (times) | | | | DC(V) | |
| 100V/s | 1000V/μs | 8/20μs 10times | 50Hz, 1sec | 8/20μs 100A | 1800VAC, 60s | 1000 | 1.0 | 1MHz | 2RK3000-8 |
| | | | | | | | | 2.0 | |

Electrical Ratings

| Items | Test Condition/Description | Requirement |
|------------------------------------|---|-----------------------------|
| DC Spark-over Voltage | The voltage is measured with voltage ramp $dv/dt=100V/s$. | |
| Maximum Impulse Spark-over Voltage | The maximum impulse spark-over voltage is measured with voltage ramp $dv/dt=1000V/\mu s$. | |
| Impulse Discharge Current | <p>Maximum 8/20μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time, without causing the DC spark-over voltage to change more than 25% from its initial value.</p> | To meet the specified value |
| Alternating Discharge Current | Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min. DC spark-over voltage shall not change more than ±25% from its initial value. $IR > 10^8$ ohms | |

| | | |
|-----------------------|---|--|
| Insulation Resistance | The resistance of gas tube shall be measured between two electrodes. | |
| Capacitance | The capacitance of gas tube shall be measured between two electrodes. Test frequency: 1MHz | |

Recommended Soldering Conditions



Packaging

| | | | | |
|--------------|--|------------------|-------|-----------|
| Skin packing | | Dimension (mm) | | |
| | | Symbol | Spec. | Tolerance |
| | | A | 265.0 | ±5.0 |
| | | B | 146.0 | ±5.0 |
| Inner box | | H | 9.5 | ±0.5 |
| | | Quantity: 100pcs | | |
| | | A0 | 270.0 | ±2.0 |
| | | B0 | 150.0 | ±2.0 |
| | | H0 | 50.0 | ±2.0 |
| | | Quantity: 500pcs | | |